

1. Flip three coins. Then draw with replacement from a word (specified below) until you get **one more vowel than the number of heads you got**. The word to be used also depends on the number of heads thrown:

| Number of heads thrown | Word to use |
|------------------------|-------------|
| 0H | LION |
| 1H | HIPPO |
| 2H | OSTRICH |
| 3H | ELEPHANT |

What is the expected number of letters drawn?

2. Find
 - a) the expected value
 - b) the variancefor the number of suits in a 6-card hand.
3. Find
 - a) the expected value
 - b) the variancefor the number of aces in a 6-card hand.
4. An urn contains 9 balls each of 7 different colors. Draw 5 times with replacement. Find the
 - a) the expected value
 - b) the variancefor the number of different colors drawn.
5. A 500-page book has 325 misprints. What is the probability there are at least two misprints on page 79?